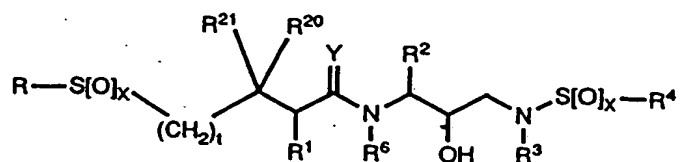


WHAT IS CLAIMED IS:

1. A compound represented by the formula:



or a pharmaceutically acceptable salt, prodrug or ester thereof wherein:

- 10 R represents hydrogen, alkyl, alkenyl, alkynyl, hydroxyalkyl, alkoxyalkyl, cycloalkyl, cycloalkylalkyl, heterocycloalkyl, heteroaryl, heterocycloalkylalkyl, aryl, aralkyl, heteroaralkyl, aminocarbonylalkyl, aminoalkylcarbonylalkyl, aminoalkyl, alkylcarbonylalkyl, 15 aryloxyalkylcarbonylalkyl, aralkoxycarbonylalkyl radicals and mono- and disubstituted aminocarbonylalkyl, aminoalkylcarbonylalkyl and aminoalkyl radicals wherein said substituents are selected from alkyl, aryl, aralkyl, cycloalkyl, cycloalkylalkyl, heteroaryl, heteroaralkyl, 20 heterocycloalkyl, and heterocycloalkylalkyl radicals, or in the case of a disubstituted radical, said substituents along with the nitrogen atom to which they are attached, form a heterocycloalkyl or a heteroaryl radical;

- 25 each x independently represents 0, 1 or 2;

t represents either 0 or 1;

- 30 R<sup>1</sup>, R<sup>20</sup> and R<sup>21</sup> independently represent hydrogen, -CH<sub>2</sub>SO<sub>2</sub>NH<sub>2</sub>, -CH<sub>2</sub>CO<sub>2</sub>CH<sub>3</sub>, -CO<sub>2</sub>CH<sub>3</sub>, -CONH<sub>2</sub>, -CH<sub>2</sub>C(O)NHCH<sub>3</sub>, -C(CH<sub>3</sub>)<sub>2</sub>(SH), -C(CH<sub>3</sub>)<sub>2</sub>(SCH<sub>3</sub>), -C(CH<sub>3</sub>)<sub>2</sub>(S(O)CH<sub>3</sub>), -C(CH<sub>3</sub>)<sub>2</sub>(S(O)<sub>2</sub>CH<sub>3</sub>), alkyl, haloalkyl, alkenyl, alkynyl and cycloalkyl radicals, and amino acid side chains selected

from asparagine, S-methyl cysteine and the sulfoxide (SO) and sulfone (SO<sub>2</sub>) derivatives thereof, isoleucine, allo-isoleucine, alanine, leucine, tert-leucine, phenylalanine, ornithine, histidine, norleucine, glutamine, threonine, glycine, allo-threonine, serine, O-alkyl serine, aspartic acid, beta-cyano alanine and valine side chains;

R<sup>2</sup> represents alkyl, aryl, cycloalkyl, cycloalkylalkyl and aralkyl radicals, which radicals are optionally substituted with a group selected from -NO<sub>2</sub>, -C≡N, CF<sub>3</sub>, -OR<sup>9</sup>, -SR<sup>9</sup>, and halogen and alkyl radicals, wherein R<sup>9</sup> represents hydrogen and alkyl radicals;

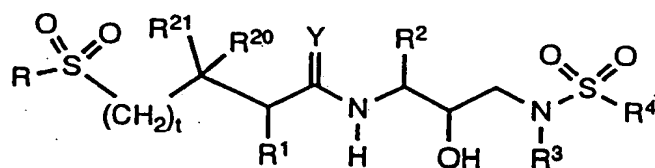
R<sup>3</sup> represents hydrogen, alkyl, haloalkyl, alkenyl, alkynyl, hydroxyalkyl, alkoxyalkyl, cycloalkyl, cycloalkylalkyl, heterocycloalkyl, heteroaryl, heterocycloalkylalkyl, aryl, aralkyl, heteroaralkyl, aminoalkyl and mono- and disubstituted aminoalkyl radicals, wherein said substituents are selected from alkyl, aryl, aralkyl, cycloalkyl, cycloalkylalkyl, heteroaryl, heteroaralkyl, heterocycloalkyl, and heterocycloalkylalkyl radicals, or in the case of a disubstituted aminoalkyl radical, said substituents along with the nitrogen atom to which they are attached, form a heterocycloalkyl or a heteroaryl radical;

Y represents O, S and NR<sup>15</sup> wherein R<sup>15</sup> represents hydrogen and radicals as defined for R<sup>3</sup>;

R<sup>4</sup> represents radicals as defined by R<sup>3</sup> except for hydrogen; and

R<sup>6</sup> represents hydrogen and alkyl radicals.

2. Compound represented by the formula:



- 5 or a pharmaceutically acceptable salt, prodrug or ester thereof, wherein;
- R represents alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkylalkyl, heterocycloalkyl, heterocycloalkylalkyl, aryl, heteroaryl, aralkyl, heteroalkyl, aminocarbonylalkyl, aminoalkylcarbonylalkyl, hydroxyalkyl, heteroaralkyl, alkylcarbonylalkyl, aryloxyalkylcarbonylalkyl and aralkoxycarbonylalkyl radicals;
- 15 R<sub>1</sub>, R<sub>20</sub> and R<sub>21</sub> independently represent hydrogen, -CH<sub>2</sub>SO<sub>2</sub>NH<sub>2</sub>, -CH<sub>2</sub>CO<sub>2</sub>CH<sub>3</sub>, -CO<sub>2</sub>CH<sub>3</sub>, -CONH<sub>2</sub>, -CH<sub>2</sub>C(O)NHCH<sub>3</sub>, -C(CH<sub>3</sub>)<sub>2</sub>(SCH<sub>3</sub>), -C(CH<sub>3</sub>)<sub>2</sub>(S(O)CH<sub>3</sub>), -C(CH<sub>3</sub>)<sub>2</sub>(S(O)<sub>2</sub>CH<sub>3</sub>), alkyl, haloalkyl, alkenyl, alkynyl and cycloalkyl radicals, and amino acid side chains selected from asparagine, S-methyl cysteine and the sulfoxide (SO) and sulfone (SO<sub>2</sub>) derivatives thereof, isoleucine, allo-isoleucine, alanine, leucine, tert-leucine, phenylalanine, ornithine, histidine, norleucine, glutamine, threonine, glycine, allo-threonine, serine, O-alkyl serine, aspartic acid, beta-cyano alanine and valine side chains;
- 25 R<sub>2</sub> represents alkyl, aryl, cycloalkyl, cycloalkylalkyl, and aralkyl radicals, which radicals are optionally substituted with a group selected from halogen and alkyl radicals, NO<sub>2</sub>, -C≡N, CF<sub>3</sub>, -OR<sub>9</sub> and -SR<sub>9</sub> wherein R<sub>9</sub> represents hydrogen and alkyl radicals, and halogen radicals;
- 30
- 35

R<sup>3</sup> represents hydrogen, alkyl, haloalkyl, alkenyl, alkynyl, hydroxyalkyl, alkoxyalkyl, cycloalkyl, cycloalkylalkyl, heterocycloalkyl, heteroaryl, heterocycloalkylalkyl, aryl, aralkyl, heteroaralkyl, aminoalkyl and mono- and disubstituted aminoalkyl radicals, wherein said substituents are selected from alkyl, aryl, aralkyl, cycloalkyl, cycloalkylalkyl, heteroaryl, heteroaralkyl, heterocycloalkyl, and heterocycloalkylalkyl radicals, or in the case of a disubstituted aminoalkyl radical, said substituents along with the nitrogen atom to which they are attached, form a heterocycloalkyl or a heteroaryl radical;

R<sup>4</sup> represents radicals as defined by R<sup>3</sup> except for hydrogen;

t represents 0 or 1; and

Y represents O, S, and NR<sup>15</sup> wherein R<sup>15</sup> represents hydrogen and radicals as defined for R<sup>3</sup>.

3. Compound of Claim 2 wherein R represents alkyl, aryl and aralkyl radicals.

4. Compound of Claim 2 wherein R represents methyl and phenethyl radicals.

5. Compound of Claim 2 wherein R represents methyl.

6. Compound of Claim 2 wherein R represents phenethyl.

7. Compound of Claim 2 wherein R<sup>1</sup> represents hydrogen, alkyl, alkenyl and alkynyl radicals.

8. Compound of Claim 2 wherein R<sup>1</sup> represents methyl, ethyl, propargyl, t-butyl, isopropyl and sec-butyl radicals.
- 5            9. Compound of Claim 2 wherein R<sup>1</sup> represents methyl, ethyl and t-butyl radicals.
- 10           10. Compound of Claim 2 wherein R<sup>1</sup> represents a methyl radical when t is 0.
11. Compound of Claim 2 wherein R<sup>1</sup> represents an ethyl radical when t is 0.
- 15           12. Compound of Claim 2 wherein R<sup>1</sup> represents alkyl radicals having from 1 to about 4 carbon atoms.
13. Compound of Claim 2 wherein R and R<sup>1</sup> both represent a methyl radical.
- 20           14. Compound of Claim 2 wherein R represents a methyl radical and R<sup>1</sup> represents an ethyl radical.
15. Compound of Claim 2 wherein R represents a methyl radical, R<sup>1</sup> represents a methyl radical and t is 0.
- 25           16. Compound of Claim 2 wherein t is 0.
17. Compound of Claim 2 wherein t is 1.
- 30           18. Compound of Claim 2 wherein R<sup>2</sup> represents alkyl, cycloalkylalkyl and aralkyl radicals, which radicals are optionally substituted with halogen radicals and radicals represented by the formula -OR<sup>9</sup> and -SR<sup>9</sup> wherein R<sup>9</sup> represents alkyl radicals.
- 35           19. Compound of Claim 2 wherein R<sup>2</sup> represents alkyl, cycloalkylalkyl and aralkyl radicals..

20. Compound of Claim 2 wherein R<sup>2</sup> represents aralkyl radicals.

21. Compound of Claim 2 wherein R<sup>2</sup> represents  
5 CH<sub>3</sub>SCH<sub>2</sub>CH<sub>2</sub>-, iso-butyl, n-butyl, benzyl, 4-fluorobenzyl, 2-naphthylmethyl and cyclohexylmethyl radicals.

22. Compound of Claim 2 wherein R<sup>2</sup> represents an n-butyl and iso-butyl radicals.

10

23. Compound of Claim 2 wherein R<sup>2</sup> represents benzyl, 4-fluorobenzyl and 2-naphthylmethyl radicals.

24. Compound of Claim 2 wherein R<sup>2</sup> represents  
15 a cyclohexylmethyl radical.

25. Compound of Claim 2 wherein R<sup>3</sup> and R<sup>4</sup> independently represent alkyl, alkenyl, hydroxyalkyl, alkoxyalkyl, haloalkyl, cycloalkyl, cycloalkylalkyl,  
20 heterocycloalkyl, heteroaryl, heterocycloalkylalkyl, aryl, aralkyl and heteroaralkyl radicals.

26. Compound of Claim 25 wherein R<sup>3</sup> represents an alkyl radical and R<sup>4</sup> represents an aryl radical.

25

27. Compound of Claim 25 wherein R<sup>3</sup> and R<sup>4</sup> independently represent alkyl and aryl radicals.

28. Compound of Claim 25 wherein R<sup>3</sup> and R<sup>4</sup> independently represent alkyl, cycloalkyl, cycloalkylalkyl, aralkyl and aryl radicals.

30

29. Compound of Claim 25 wherein R<sup>3</sup> and R<sup>4</sup> independently represent alkyl, cycloalkyl and  
35 cycloalkylalkyl radicals.

30. Compound of Claim 25 wherein R<sup>3</sup> and R<sup>4</sup> independently represent alkyl, heterocycloalkyl and heterocycloalkylalkyl radicals.

5 31. Compound of Claim 25 wherein R<sup>3</sup> and R<sup>4</sup> independently represent alkyl, aryl and aralkyl radicals.

32. Compound of Claim 25 wherein R<sup>4</sup> represents phenyl, p-fluorophenyl, p-nitrophenyl, p-methoxyphenyl,  
10 p-chlorophenyl and p-aminophenyl radicals.

33. Compound of Claim 2 wherein R<sup>3</sup> represents alkyl radicals having from about 2 to about 5 carbon atoms.

15 34. Compound of Claim 2 wherein R<sup>3</sup> represents n-pentyl, n-hexyl, n-propyl, i-butyl, neo-pentyl, i-amyl, and n-butyl radicals.

20 35. Compound of Claim 2 wherein R<sup>3</sup> represents alkyl radicals having from about 2 to about 5 carbon atoms, and cycloalkyl and cycloalkylalkyl radicals having from about 6 to about 10 carbon atoms; and R<sup>4</sup> represents aryl and heteroaryl radicals which may be substituted  
25 with substituents selected from chloro, fluoro, nitro, methoxy and amino substituents.

36. Compound of Claim 2 wherein R<sup>3</sup> represents benzyl, para-fluorobenzyl, para-methoxybenzyl, para-methylbenzyl, and 2-naphthylmethyl radicals and R<sup>4</sup>  
30 represents phenyl radicals and substituted phenyl radicals, wherein substituents of the substituted phenyl radical are selected from chloro, fluoro, nitro, methoxy and amino substituents.

35 37. Compound of Claim 2 wherein R<sup>3</sup> is cyclohexylmethyl and R<sup>4</sup> is phenyl.

38. Compound of Claim 2 wherein R<sup>3</sup> is i-amyl and R<sup>4</sup> is phenyl.

39. Compound of Claim 2 wherein R<sup>3</sup> is i-butyl and R<sup>4</sup> is phenyl.

40. Compound of Claim 2 wherein R<sup>3</sup> is n-butyl and R<sup>4</sup> is phenyl.

41. Compound of Claim 2 wherein R<sup>3</sup> is neopentyl and R<sup>4</sup> is phenyl.

42. Compound of Claim 2 wherein R<sup>4</sup> represents aryl radicals.

43. Compound of Claim 2 wherein R<sup>4</sup> represents substituted aryl and heteroaryl radicals wherein substituents are selected from halo, nitro, alkoxy, and amino radicals.

44. Compound of Claim 2 wherein R<sup>3</sup> and R<sup>4</sup> independently represent alkyl, cycloalkyl, cycloalkylalkyl, aryl and aralkyl radicals.

45. Compound of Claim 2 wherein R<sup>3</sup> represents heteroaralkyl radicals and R<sup>4</sup> is an aryl radical.

46. Compound of Claim 2 wherein R<sup>3</sup> is a p-fluorobenzyl radical and R<sup>4</sup> is an aryl radical.

47. Compound of Claim 2 wherein R<sup>3</sup> is a 4-pyridylmethyl radical or its N-oxide and R<sup>4</sup> is an aryl radical.

48. Compound of Claim 2 wherein R<sup>4</sup> represents methyl and cyclohexyl radicals and R<sup>3</sup> represents an alkyl radical.



49. Compound of Claim 2 wherein  $R^3$  and  $R^4$  independently represent aryl radicals optionally substituted with substituents selected from amino, alkoxy, halo, and nitro substituents.
50. Compound of Claim 2 wherein  $R^{20}$  and  $R^{21}$  are both hydrogen and  $R^1$  represents an alkyl radical having from 1 to about 4 carbon atoms.
51. Compound of Claim 2 wherein  $R^{20}$  and  $R^{21}$  are both hydrogen and  $R^1$  represents,  $-CH_2SO_2NH_2$ ,  $CO_2NH_2$ ,  $CO_2CH_3$ , alkyl and cycloalkyl radicals and amino acid side chains selected from asparagine, S-methyl cysteine and the sulfone and sulfoxide derivatives thereof, histidine, norleucine, glutamine, glycine, allo-isoleucine, alanine, threonine, isoleucine, leucine, tert-leucine, phenylalanine, ornithine, allo-threonine, serine, O-methyl serine, aspartic acid, beta-cyano alanine and valine side chains.
52. Compound of Claim 2 wherein  $t$  is O,  $R^1$  represents an alkyl radical and  $R$  represents an alkyl, cycloalkyl, cycloalkylalkyl or an aryl radical.
53. Compound of Claim 2 wherein  $R$  represents a heteroaryl radical.
54. Compound of Claim 2 wherein  $R$  represents an alkyl or aryl radical.
55. Compound of Claim 2 wherein  $t$  is O,  $R^1$  represents a methyl or ethyl radical and  $R$  represents a methyl or phenethyl radical.
56. Compound of Claim 2 wherein  $R$  represents an aralkylcarbonylalkyl, aryloxy carbonylalkyl, alkanoylalkyl, aminocarbonylalkyl, or a mono- or dialkylaminocarbonylalkyl radical.

57. Compound of Claim 2 wherein R represents an aryloxy carbonylalkyl or alkanoylalkyl radical.

5 58. Compound of Claim 2 wherein R represents an aminocarbonylalkyl radical, a monosubstituted aminoalkanoylalkyl radical or disubstituted aminoalkanoylalkyl radical.

10 59. Compound of Claim 2 where R represents an aralkylcarbonylalkyl radical.

60. Compound of Claim 2 where t is 1 and R<sup>1</sup> is a methyl radical.

15 61. Compound of Claim 60 where R represents an alkyl, cycloalkyl, cycloalkylalkyl, aryl or aralkyl radical.

20 62. Compound of Claim 60 where R represents a methyl, cyclohexyl, cyclohexylmethyl, phenyl, benzyl or phenethyl radical.

25 63. Compound of Claim 2 wherein t is 1, R<sup>20</sup> and R<sup>21</sup> are both hydrogen and R<sup>1</sup> is methyl or ethyl.

64. Compound of Claim 60 wherein R represents an aminocarbonylalkyl or a mono- or dialkylaminocarbonylalkyl radical.

30 65. Compound of Claim 60 where R represents an N,N-dimethylaminocarbonylalkyl radical.

35 66. A pharmaceutical composition comprising a compound of Claim 1 and a pharmaceutically acceptable carrier.

67. A pharmaceutical composition comprising a compound of Claim 2 and a pharmaceutically acceptable carrier.

5           68. Method of inhibiting a retroviral protease comprising administering a protease inhibiting amount of a composition of Claim 66.

10           69. Method of Claim 68 wherein the retroviral protease is HIV protease.

15           70. Method of treating a retroviral infection comprising administering an effective amount of a composition of Claim 66.

            71. Method of Claim 70 wherein the retroviral infection is an HIV infection.

20           72. Method for treating AIDS comprising administering an effective amount of a composition of Claim 66.

25           73. Method of inhibiting a retroviral protease comprising administering a protease inhibiting amount of a composition of Claim 67.

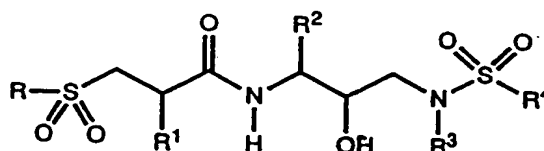
            74. Method of Claim 73 wherein the retroviral protease is HIV protease.

30           75. Method of treating a retroviral infection comprising administering an effective amount of a composition of Claim 67.

35           76. Method of Claim 75 wherein the retroviral infection is an HIV infection.

77. Method for treating AIDS comprising administering an effective amount of a composition of Claim 67.

5 78. Compound represented by the formula:



10 or a pharmaceutically acceptable salt, prodrug or ester thereof, preferably wherein the stereochemistry about the hydroxy group is designated as (R);

R represents alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkylalkyl, heterocycloalkyl, heterocycloalkylalkyl, 15 aryl, heteroaryl, aralkyl, heteroaralkyl, aminocarbonylalkyl, aminoalkylcarbonylalkyl, hydroxyalkyl, alkoxyalkyl, alkylcarbonylalkyl, aryloxyalkylcarbonylalkyl and aralkoxycarbonylalkyl radicals;

20 R<sup>1</sup> represents hydrogen, -CH<sub>2</sub>SO<sub>2</sub>NH<sub>2</sub>, -CH<sub>2</sub>CO<sub>2</sub>CH<sub>3</sub>, -CO<sub>2</sub>CH<sub>3</sub>, -CONH<sub>2</sub>, -CH<sub>2</sub>C(O)NHCH<sub>3</sub>, -C(CH<sub>3</sub>)<sub>2</sub>(SCH<sub>3</sub>), -C(CH<sub>3</sub>)<sub>2</sub>(S[O]CH<sub>3</sub>), -C(CH<sub>3</sub>)<sub>2</sub>(SH), -C(CH<sub>3</sub>)<sub>2</sub>(S[O]<sub>2</sub>CH<sub>3</sub>), alkyl, haloalkyl, alkenyl, alkynyl and cycloalkyl radicals, and amino acid 25 side chains selected from asparagine, S-methyl cysteine and the sulfoxide (SO) and sulfone (SO<sub>2</sub>) derivatives thereof, isoleucine, allo-isoleucine, alanine, leucine, tert-leucine, phenylalanine, ornithine, histidine, norleucine, glutamine, threonine, glycine, allo-threonine, 30 serine, O-methyl serine, aspartic acid, beta-cyano alanine and valine side chains;

R<sup>2</sup> represents alkyl, aryl, cycloalkyl, cycloalkylalkyl, and aralkyl radicals, which radicals are optionally 35 substituted with a group selected from halogen and alkyl

radicals,  $\text{NO}_2$ ,  $-\text{C}\equiv\text{N}$ ,  $\text{CF}_3$ ,  $\text{OR}^9$  and  $\text{SR}^9$  wherein  $\text{R}^9$  represents hydrogen and alkyl radicals;

$\text{R}^3$  represents hydrogen, alkyl, haloalkyl, alkenyl, alkynyl, hydroxyalkyl, alkoxyalkyl, cycloalkyl, cycloalkylalkyl, heterocycloalkyl, heteroaryl, heterocycloalkylalkyl, aryl, aralkyl, heteroaralkyl, aminoalkyl and mono- and disubstituted aminoalkyl radicals, wherein said substituents are selected from alkyl, aryl, aralkyl, cycloalkyl, cycloalkylalkyl, heteroaryl, heteroaralkyl, heterocycloalkyl, and heterocycloalkylalkyl radicals, or in the case of a disubstituted aminoalkyl radical, said substituents along with the nitrogen atom to which they are attached, form a heterocycloalkyl or a heteroaryl radical; and

$\text{R}^4$  represents radicals as defined by  $\text{R}^3$  except for hydrogen.

79. Compound of Claim 78 wherein  $\text{R}$  represents alkyl, alkenyl, cycloalkyl, cycloalkylalkyl, heterocycloalkyl, heterocycloalkylalkyl, aryl, heteroaryl, aralkyl, heteroaralkyl, aminocarbonylalkyl, aminoalkylcarbonylalkyl, alkylcarbonylalkyl, aryloxyalkylcarbonylalkyl and aralkoxycarbonylalkyl radicals.

80. Compound of Claim 78 wherein  $\text{R}^1$  represents hydrogen, alkyl and alkenyl and alkynyl radicals.

81. Compound of Claim 78 wherein  $\text{R}^1$  represents alkyl radicals having from 1 to about 4 carbon atoms, alkenyl radicals having from 2 to 8 carbon atoms, and alkynyl radicals having from 2 to about 8 carbon atoms.

82. Compound of Claim 78 wherein  $\text{R}^1$  represents methyl, ethyl, isopropyl, t-butyl and propargyl radicals.

83. Compound of Claim 78 wherein R<sup>1</sup> represents methyl, ethyl and t-butyl radicals.

84. Compound of Claim 78 wherein R<sup>1</sup> represents  
5 methyl and ethyl radicals.

85. Compound of Claim 78 wherein R<sup>1</sup> represents a methyl radical.

10 86. Compound of Claim 78 wherein R represents alkyl, cycloalkyl, cycloalkylalkyl, aryl and aralkyl radicals.

15 87. Compound of Claim 78 wherein R is selected from alkyl and aralkyl radicals.

20 88. Compound of Claim 78 wherein R<sup>2</sup> represents alkyl, cycloalkylalkyl and aralkyl radicals, which radicals are optionally substituted with halogen radicals and radicals represented by the formula -OR<sup>9</sup> and -SR<sup>9</sup> wherein R<sup>9</sup> represents alkyl radicals.

25 89. Compound of Claim 78 wherein R<sup>2</sup> represents alkyl, cycloalkylalkyl and aralkyl radicals.

90. Compound of Claim 78 wherein R<sup>2</sup> represents aralkyl radicals.

30 91. Compound of Claim 78 wherein R<sup>2</sup> represents CH<sub>3</sub>SCH<sub>2</sub>CH<sub>2</sub>-, iso-butyl, n-butyl, benzyl, 4-fluorobenzyl, 2-naphthylmethyl and cyclohexylmethyl radicals.

35 92. Compound of Claim 78 wherein R<sup>2</sup> represents an n-butyl and iso-butyl radicals.

93. Compound of Claim 78 wherein R<sup>2</sup> represents benzyl, 4-fluorobenzyl, and 2-naphthylmethyl radicals.

94. Compound of Claim 78 wherein R<sup>2</sup> represents a cyclohexylmethyl radical.

5            95. Compound of Claim 78 wherein R<sup>3</sup> and R<sup>4</sup> independently represent alkyl, haloalkyl, alkenyl, hydroxyalkyl, alkoxyalkyl, cycloalkyl, cycloalkylalkyl, heterocycloalkyl, heterocycloalkylalkyl, aryl, aralkyl, heteroaryl and heteroaralkyl radicals.

10           96. Compound of Claim 95 wherein R<sup>3</sup> and R<sup>4</sup> independently represent alkyl, aralkyl, cycloalkyl, cycloalkylalkyl and aryl radicals.

15           97. Compound of Claim 95 wherein R<sup>3</sup> and R<sup>4</sup> independently represent alkyl and aryl radicals.

            98. Compound of Claim 95 wherein R<sup>3</sup> and R<sup>4</sup> independently represent alkyl and alkoxyalkyl radicals.

20           99. Compound of Claim 95 wherein R<sup>3</sup> and R<sup>4</sup> independently represent alkyl, cycloalkyl and cycloalkylalkyl radicals.

25           100. Compound of Claim 95 wherein R<sup>3</sup> and R<sup>4</sup> independently represent alkyl, heterocycloalkyl and heterocycloalkylalkyl radicals.

            101. Compound of Claim 95 wherein R<sup>3</sup> and R<sup>4</sup> independently represent alkyl, aryl and aralkyl radicals.

30           102. Compound of Claim 95 wherein R<sup>3</sup> and R<sup>4</sup> independently represent alkyl, cycloalkyl, cycloalkylalkyl, heterocycloalkyl, heterocycloalkylalkyl, aryl, aralkyl, heteroaryl and heteroaralkyl radicals.

103. Compound of Claim 78 wherein R<sup>3</sup> represents alkyl radicals having from about 2 to about 5 carbon atoms.

5           104. Compound of Claim 96 wherein R<sup>4</sup> represents methyl, ethyl, i-propyl, t-butyl and 1,1-dimethylpropyl radicals.

10           105. Compound of Claim 78 wherein R<sup>3</sup> and R<sup>4</sup> independently represent alkyl radicals having from about 2 to about 5 carbon atoms, cycloalkylalkyl radicals, aralkyl radicals, heterocycloalkylalkyl radicals and heteroaralkyl radicals.

15           106. Compound of Claim 78 wherein R<sup>3</sup> represents benzyl, para-fluorobenzyl, para-methoxybenzyl, para-methylbenzyl, and 2-naphthylmethyl radicals and R<sup>4</sup> represents phenyl.

20           107. Compound of Claim 78 wherein R<sup>3</sup> is cyclohexylmethyl or cyclohexyl and R<sup>4</sup> is phenyl.

            108. Compound of Claim 78 wherein R<sup>3</sup> is i-amyl and R<sup>4</sup> is phenyl.

25

            109. Compound of Claim 78 wherein R<sup>3</sup> is i-butyl and R<sup>4</sup> is phenyl.

            110. Compound of Claim 78 wherein R<sup>3</sup> is n-butyl and R<sup>4</sup> is phenyl.

30

            111. Compound of Claim 78 wherein R<sup>3</sup> is neo-pentyl and R<sup>4</sup> is phenyl.

35

            112. Compound of Claim 78 wherein R<sup>4</sup> represents aryl radicals which are substituted with substituents selected from alkoxy, alkyl, carboalkoxy, carboxy, amino, halo, and nitro substituents.



113. Compound of Claim 78 wherein R<sup>4</sup> represents aryl radicals which are substituted with substituents selected from amino, acetamido, chloro, fluoro, methoxy and nitro.

114. Compound of Claim 113 wherein the R<sup>4</sup> aryl substituents are in the para-position.

115. Compound of Claim 78 wherein R<sup>3</sup> represents heteroaralkyl radicals and R<sup>4</sup> is a phenyl radical.

116. Compound of Claim 78 wherein R<sup>3</sup> is a p-fluorobenzyl radical and R<sup>4</sup> is a phenyl radical.

117. A pharmaceutical composition comprising a compound of Claim 78 and a pharmaceutically acceptable carrier.

118. Method of inhibiting a retroviral protease comprising administering a protease inhibiting amount of a composition of Claim 117.

119. Method of Claim 118 wherein the retroviral protease is HIV protease.

120. Method of treating a retroviral infection comprising administering an effective amount of a composition of Claim 117.

121. Method of Claim 120 wherein the retroviral infection is an HIV infection.

122. Method for treating AIDS comprising administering an effective amount of a composition of Claim 117.

123. A compound of Claim 1 which is:

Propanamide, N-[2-hydroxy-3-[(2-methylpropyl)(phenylsulfonyl)amino]-1-(phenylmethyl)propyl]-2-methyl-3-(methanesulfonyl)-, [1S-[1R\*(R\*),2S\*]]-;

Propanamide, N-[2-hydroxy-3-[(3-methylbutyl)(phenylsulfonyl)amino]-1-(phenylmethyl)propyl]-2-methyl-3-(methanesulfonyl)-, [1S-[1R\*(R\*),2S\*]]-;

Propanamide, N-[2-hydroxy-3-[(propyl)(phenylsulfonyl)amino]-1-(phenylmethyl)propyl]-2-methyl-3-(methanesulfonyl)-, [1S-[1R\*(R\*),2S\*]]-;

Propanamide, N-[2-hydroxy-3-[(butyl)(phenylsulfonyl)amino]-1-(phenylmethyl)propyl]-2-methyl-3-(methanesulfonyl)-, [1S-[1R\*(R\*),2S\*]]-;

Propanamide, N-[2-hydroxy-3-[(2-methylpropyl)(4-methoxyphenylsulfonyl)amino]-1-(phenylmethyl)propyl]-2-methyl-3-(methanesulfonyl)-, [1S-[1R\*(R\*),2S\*]]-;

Propanamide, N-[2-hydroxy-3-[(butyl)(4-methoxyphenylsulfonyl)amino]-1-(phenylmethyl)propyl]-2-methyl-3-(methanesulfonyl)-, [1S-[1R\*(R\*),2S\*]]-;

Propanamide, N-[2-hydroxy-3-[(propyl)(4-methoxyphenylsulfonyl)amino]-1-(phenylmethyl)propyl]-2-methyl-3-(methanesulfonyl)-, [1S-[1R\*(R\*),2S\*]]-;

Propanamide, N-[2-hydroxy-3-[(2-methylpropyl)(4-acetamido)phenylsulfonyl)amino]-1-(phenylmethyl)propyl]-2-methyl-3-(methanesulfonyl)-, [1S-[1R\*(R\*),2S\*]]-;

Propanamide, N-[2-hydroxy-3-[(3-methylbutyl)

(4-amino)phenylsulfonyl)amino]-1-(phenylmethyl)propyl]-2-methyl-3-(methylsulfonyl)-, [1S-[1R\*(R\*),2S\*]]-;

5 Propanamide, N-[2-hydroxy-3-[(2-methylpropyl)  
(3,4-dimethoxy)phenylsulfonyl)amino]-1-(phenylmethyl)propyl]-2-methyl-3-(methylsulfonyl)-, [1S-[1R\*(R\*),2S\*]]-; or

10 Preparation of Propanamide, N-[2-hydroxy-3-[(3-methylbutyl)(4-methoxyphenylsulfonyl)amino]-1-(phenylmethyl)propyl]-2-methyl-3-(methylsulfonyl)-[1S-[1R\*(R\*),2S\*]]-.